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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/987,462 | 11/14/2001 | Yuzo Koshiro | H9876.0065/P065 | 6992 |
| 24998 | 7590 | 06/15/2004 | EXAMINER | |
| DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP | | | NGUYEN, KIMBINH T | |
| 2101 L STREET NW | | | ART UNIT | |
| WASHINGTON, DC 20037-1526 | | | PAPER NUMBER | |

2671
DATE MAILED: 06/15/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,462

Applicant(s)

KOSHIRO ET AL.

Examiner

Kimbinh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6 and 9-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6 and 9-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 9.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Examiner-Initiated Interview Summary

Application No.

09/987,462

Applicant(s)

KOSHIRO ET AL.

Examiner

Kimbinh T. Nguyen

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All Participants:

(1) Kimbinh T. Nguyen.

(2) Thomas D'Amico.

Status of Application: Final Rejection

(3) _____

(4) _____

Date of Interview: 28 May 2004

Time: _____

Type of Interview:

☒ Telephonic

☐ Video Conference

☐ Personal (Copy given to: ☐ Applicant ☐ Applicant's representative)

Exhibit Shown or Demonstrated: ☐ Yes ☒ No

If Yes, provide a brief description:

Part I.

Rejection(s) discussed:

Claims discussed:

Claim 1

Prior art documents discussed:

Part II.

SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:

See Continuation Sheet

Part III.

☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.

☒ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.

Kimbinh T. Nguyen
(Examiner/SPE Signature)

(Applicant/Applicant's Representative Signature – if appropriate)

Continuation of Substance of Interview including description of the general nature of what was discussed:
Representative's applicant and the examiner discussed claim 1 and especially the limitation: "displaying an input outline trace on the display device, formed using an image input device" which is supported in the specification (page 13, line 11).

DETAILED ACTION

1. This action is responsive to amendment filed 4/5/04.
2. Claims 1, 4-6, 9-34 are pending in the application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4, 12-18, 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Berend et al. (5,692,117).

Claim 1, Berend et al. clearly anticipated displaying a skeleton model (a human skeleton; fig. 35) comprising a plurality of skeletal parts (comprises a plurality of bones B1-B10 and joints; fig. 35; col. 34, lines 60-64) for the display object on a display device (the display on the monitor 160; fig. 44); displaying an input outline trace (the bones and joints surrounded by a 3D envelope shown in outline; col. 35, lines 28-38) on the display device (monitor 160) formed using an image input device (figs. 46, 47 and 59-62 show the display on the monitor 160 envelop components for bones of the 3D object by the outline curve around each bone. The user manipulates and edits the object (the outline curve) by use of the position sensitive input device (for example a "mouse" 170a to cause a corresponding movement of a cursor symbol on the screen of the monitor 160, see col. 13, lines 16-32); associating the input outline trace with the skeleton model of

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the display object (a component is associated with an armature, the component is shown in the display areas 160f, 160g as an outline curve surrounding the armature; col. 38, lines 50-62); expanding and converting the outline trace associated with the skeleton model into a three-dimensional display object image (col. 36, lines 63-66); displaying data of the expanded and converted 3D display object image on the display device (col. 38, lines 28-49); converting the input outline trace into closed outline traces corresponding to each of the plurality of skeletal parts (col. 35, lines 57-60; figs. 39a, 39b); when there are a plurality of the input outline traces for the skeleton model, the step of converting the outline traces into a single closed outline trace formed by connecting the outermost traces of the outline traces (the union of the outermost sectors of each section, linked by curve portions; col. 47, lines 7-11); when the input outline trace is input to span a plurality of skeletal parts (the outline curve generated using the extent points; col. 45, lines 41-50), the step of converting the input outline trace into closed outline traces (a closed curve) for each of the plurality of skeletal parts (col. 46, line 45 through col. 47 line 16).

Claim 4, Berend et al. discloses the skeleton model of the display object is displayed on the display device (monitor 160), with the basic shape image of the display object and the skeletal parts constituting the skeleton model being superimposed with each other (overlap or superimpose; col. 39, lines 1-23; col. 51, lines 20-29; col. 57, lines 49-50).

Claim 12, the rationale provided in the rejection of claim 1 is incorporated herein.

Claims 13 and 14, the rationale provide in the rejection of claim 1 is incorporated herein. In addition, Berend et al. teaches a recording medium (col. 11, lines 20-22).

Claims 15, 16, Berend et al. teaches the input outline trace comprises at least one movement trace formed using the image input device (image input device 170a; col. 39, lines 5-23); the image input device comprises a mouse (col. 13, lines 17-19; col. 39, lines 14-16).

Claims 17 and 18, Berend et al. teaches the image input device is a user interface device which permits a user to form the input outline trace (col. 39, lines 12-22); the image input device manipulates a pen pointer on the display device (col. 21, lines 23-35).

Claim 24, the rationale provided in the rejection of claim 1 is incorporated herein. In addition, Berend et al. teaches displaying an input outline trace on the display device formed based on another use input from an image input device (keyboard 170b; col. 13, lines 47-53).

Claim 25, Berend et al. teaches converting the output outline trace into closed outline traces corresponding to skeleton parts (col. 46, line 45 through col. 47 line 16).

Claim 26, Berend teaches converting the outline traces into a single closed outline trace formed by connecting the outermost traces of the outline traces when there are a plurality of the input outline traces for the skeleton model (the union of the outermost sectors of each section , link by curve portions; col. 47, lines 7-11).

Claim 27, Berend et al. teaches converting the input outline trace into closed outline traces of skeletal parts when the input outline trace is input to span of skeletal parts (col. 36, lines 64-66).

Claims 28 and 29, the rationale provided in the rejections of claims 15 and 17 are incorporated herein.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 6, 9-11, 19-23, 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berend et al. (5,692,117) in view of Hunter (6,384,819).

Claim 5, Berend does not suggest a game program; however, Hunter discloses the program constitutes a game program executed by the information processing equipment (col. 1, lines 34-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the constituting a game program as taught by Hunter into the outline curve of Berend for displaying object generation program executed by information processing equipment, because it would perform automatic animation via a game or animation package (col. 7, lines 49-50).

Claim 6, Berend et al. discloses setting a basic body having a specific attribute parameter in advance for the skeleton model (attribute control point comprises a parametric position on the outline curve of skeleton; col. 51, lines 12-15); attaching an

attribute parameter (to add an attribute control point; col. 51, line 8), obtained by modifying the attribute parameter of the basic body according to the ratio of the outline trace associated with the skeleton model to data associated with the basic body, to the data of the expanded and converted 3D display object image. Berend does not teach modifying the attribute parameter of the basic body; however, Hunter teaches the parameters of the skeleton are then adjusted (modified) to surround the entire desired object in the digital image; col. 4, lines 66-67; col. 5, lines 14-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the feature of modifying the parameters of the skeleton as taught by Hunter into the outline curve of Berend for converting a 3D data to the display device, because it would provide a system and method for quickly and effectively generating a customized animatable character in a computer system (col. 1, lines 60-62).

Claim 9, Berend does not teach the behavior mode; however, Hunter teaches the behavior mode of the generated 3D display object is characterized by the attribute parameters (col. 7, lines 22-36; col. 8, lines 1-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features of behavior mode as taught by Hunter into the outline curve of Berend for converting a 3D data to the display device, because it would create the customized character quickly and efficiently without the need for programming in code (col. 7, lines 22-23).

Claims 10 and 11, Berend does not teach the attribute parameter; however, Hunter teaches the attribute parameter can be modified through selection of a texture to be applied to the generated 3D display object (col. 5, lines 1-9); the attribute parameter

can be modified (can be changed) through the area of the closed outline traces associated with a plurality of skeletal parts constituting the skeleton model, or through the volume of the generated 3D object (col. 7, lines 22-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features of behavior mode and modifying the attribute parameters of the skeleton as taught by Hunter into the outline curve of Berend for converting a 3D data to the display device, because it would create the customized character, the parameter of the skeleton could be changed and the desired object from the digital image changed along with the skeleton (col. 7, lines 29-32).

Claims 19 and 20, Berend et al. teaches storing first attribute data associated with the basic body for the skeletal model (storing control points of two different kinds; the first active kind; col. 4, lines 3-8); determining a modifier value (interpolating or amended) based on a ratio of data associated with the outline trace data associated with data the first attribute data (col. 28, lines 7-16); determining a second attribute data based on the modifier value (a new attribute control point record for new attribute control is created; col. 28, lines 10-16); storing the second attribute data of the expanded and converted 3D object (the new data are stored with the attribute control point records; col. 27, lines 40-67); the first attribute is a base parameter (attribute control points A1, A2), the second attribute is a modified parameter (the new control A3 is created). Berend does not show a modifier value; however, Berend teaches using template frame table and interpolated table which comprises a set of the control points held in each key frame (col. 27, lines 12-67; figs. 29; col. 53, lines 5-14); this feature

related to the attribute value because it corresponds to the position of the attribute control point within the curve. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the template frame table taught by Berend for providing the modifier value of the attribute data, because it would allow a user to add further attribute control points to a key frame of different timelines to produce composite frames (col. 27, lines 10-16).

Claims 22 and 23, Berend et al. teaches the second attribute is increased based on a positive difference (the angular difference); the second attribute is decreased based on a negative difference (the angular difference) (it is possible to increase or decrease the length of an armature, by changing (modifying) the position of its second control points; col. 48, lines 24-27; col. 52, lines 50-57).

Claims 30 and 31, the rationale provided in the rejections of claims 19 and 20 are incorporated herein.

Claims 21 and 32, Berend et al. teaches the second attribute based on a determination of percentage difference (difference) between data associated with the outline trace to data associated with data for the basic body comprising the first attribute data (the first interpolated table is derived 0.1 times the second stored table and 0.9 times the first; col. 53, lines 1-14; col. 54, lines 13-15).

Claim 33, Berend does not teach texture; however, Hunter discloses laminating a texture map to the skeleton (col. 9, lines 21-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate texture map to the skeleton as taught by Hunter into the outline curve of Berend for displaying a 3D

data to the display device, because it would improve the appearance of the joints of the skeleton (col. 5, lines 3-4).

Claim 34, Berend et al. teaches the second attribute can be modified (interpolated) based upon an area of the closed outline traces ((armature or envelope component data) associated with the skeleton parts constituting the skeleton model or based upon a volume of the generated 3D object (col. 53, line 36 through col. 54 line 15).

Response to Arguments

7. Applicant's arguments filed 4/5/04 have been fully considered but they are not persuasive. Because in the amendment, dependent claims 2, 3, 7 and 8 have been canceled; the limitations of the dependent claims 2, 3, 7 and 8 have been incorporated into the independent claim 1; however, they are rejected in the First Office Action and also in this Office Action. In addition, claim 1, Berend et al. teaches "displaying an input outline trace on the display device formed using an image input device" (the bones and joints surrounded by a 3D envelope shown in outline) on the display device (monitor 160) formed using an image input device (figs. 46, 47 and 59-62 show the display on the monitor 160 envelop components for bones of the 3D object by the outline curve around each bone. The user manipulates and edits the object (the outline curve) by use of the position sensitive input device (for example a "mouse" 170 to cause a corresponding movement of a cursor symbol on the screen of the monitor 160, see col. 13, lines 16-32); envelope of Berend data is manipulated and edited by using of the position sensitive input device 170a from a user (col. 13, lines 16-32). Further, claim 4, Berend also teaches the input outline trace comprises at least one movement trace

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formed using the image input device (col. 13, lines 29-32). For these reasons, the rejections of claims 1, 4-6, 9-34 are maintained.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

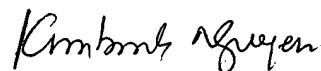
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Technology Center 2600 Customer Service Office
whose telephone number is (703) 306-0377.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

June 3, 2004



Kimbinh Nguyen

Patent Examiner AU 2671